

WHAT IS CLAIMED IS:

1. A storage system, comprising: one or a plurality of channel interface units for interfacing with host computers; one or a plurality of disk interface units for interfacing with disk drives; local shared memory units for storing data to be read out of or written to said disk drives and control information about transfer of said data and management information of said disk drives; a plurality of disk control clusters implementing the data read/write operation in response to a data read/write request from said host computer with said channel interface unit to transfer data between said interface with said host computer and said local shared memory unit, and with said disk interface unit to transfer data between said local shared memory unit and said disk drives; and global shared memory units for storing management information of disk control clusters, wherein, said disk control clusters are connected each other by an interconnection, and said global shared memory unit connects to said interconnection.

2. A storage system according to claim 1, wherein a connection portion for connecting said channel interface unit and disk interface unit and said local shared memory unit in each of said disk control clusters connects to the

connecting portion of said another disk control cluster via said interconnection.

3. A storage system according to claim 1, wherein said channel interface units and disk interface units in each of said disk control cluster directly connects to said local shared memory units in said disk control cluster, and said local shared memory units in each of said disk control cluster and the local shared memory units in said another disk control cluster are connected via said interconnection.

4. A storage system according to claim 1, wherein said channel interface units and disk interface units in each of said disk control cluster directly connects to said local shared memory units in said disk control cluster, and the connecting portion of said channel interface units and disk interface units in each of said disk control cluster is connected with said connecting portion in said another disk control cluster via said interconnection.

5. A storage system, comprising: one or a plurality of channel interface units for interfacing with host computers, one or a plurality of disk interface units for interfacing with disk drives, a plurality of disk control

clusters having connection portion for connecting said one or plurality of said channel interface units to said one or plurality of said disk interface units, and global shared memory units for storing data to be read out of and written to said disk drives, control information about transfer of said data, management information of said disk drives, and management information of said disk control clusters, wherein said connecting portion in said disk control cluster and said connecting portion in said another disk control cluster are connected with each other via an interconnection, and said global shared memory units connects to said interconnection.

6. A storage system, comprising: one or a plurality of channel interface units for interfacing with host computers; one or a plurality of disk interface units for interfacing with disk drives; local shared memory units having a first memory for storing data to be read out of and written to said disk drives and a second memory for storing control information about data transfer between said channel interface units and disk interface units and said first memory, and management information of said disk drives; a plurality of disk control clusters implementing the data read/write operation in response to a data read/write request from said host computer with said channel

interface units to transfer data between said interface with said host computers and said first memory in said local shared memory unit and with said disk interface units to transfer data between said first memory in said local shared memory unit and said disk drives; and global shared memory units for storing management information of disk control clusters, wherein, said channel interface units and disk interface units in said disk control cluster directly connects to said second memory in said local shared memory unit in said disk control cluster, a first connection portion of said channel interface units and said disk interface units in the respective disk control cluster and the first connection portion in another disk control cluster are connected with each other via a first interconnection, said global shared memory units connects to the first interconnection, a second connection portion, where said channel interface units and disk interface units in said disk control cluster and said first memory in said local shared memory unit are connected, and said second connection portion in said another disk control cluster are connected via a second interconnection.

7. A storage system according to claim 6, wherein said channel interface units and disk interface units in said disk control cluster directly connects to said first memory

in said local shared memory unit in said disk control cluster, said first memory in said local shared memory unit in said disk control cluster and said first memory in said local shared memory unit in said another disk control cluster are connected with each other via a second interconnection.

8. A storage system according to claim 1, wherein said local shared memory units stores information indicating storage areas where said disk control cluster, to which said local shared memory unit belong; manages, said global shared memory units stores information indicating storage areas where each of said disk control clusters manages, a processor in said channel interface unit accesses to said local shared memory units in said disk control cluster when said host computer makes a data read/write request to said channel interface unit in said disk control cluster to identify whether or not the requested data is stored in the storage areas which said disk control cluster manages, and, if not stored therein, accesses to said global shared memory units to check the disk control cluster where said requested data is stored.